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Quality Engineering Test Report

SERIES: S-240 240W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A.S-240-5 5V / 40A D.S-240-15 15V / 15A
B.S-240-7.5 7.5V / 30A E.S-240-24 24V / 10A
C.S-240-12 12V / 18A F.S-240-30 30V / 8A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:176~264VAC O/P:FULL LOAD	A:147VAC~267VAC	P
2	LINE REGULATION	I/P:176~264VAC SPEC: O/P:FULL LOAD A: ±0.5% B: ±0.5% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5% ±0.5%	A: 0% ~ +0.12% B: +0.08% ~ +0.08% C: -0.05% ~ 0% D: -0.04% ~ 0% E: -0.02% ~ +0.02% F: -0.04% ~ +0.04% F: -0.04% ~ +0.04%	P
3	LOAD REGULATION	I/P:230VAC SPEC: O/P:MIN. TO FULL LOAD A: ±1% B: ±1% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5% ±0.5%	A: -0.36% ~ +0.36% B: -0.08% ~ +0.08% C: -0.10% ~ +0.1% D: -0.04% ~ +0.04% E: -0.02% ~ +0.07% F: -0.02% ~ +0.08%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:180~264VAC SPEC: O/P:0% TO FULL LOAD A: ±2% B: ±2% C: ±1% D: ±1% E: ±1% F:: ±1% ±1%	A: -0.5% ~ 0% B: -0.16% ~ +0.09% C: -0.16% ~ +0.05% D: -0.08% ~ 0% E: -0.13% ~ +0.13% F: -0.31% ~ 0%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: O/P:FULL LOAD A: 150mV B: 200mV C: 150mV D: 150mV E: 180mV F: 180mV	A: 104mV B: 90mV C: 111mV D: 42mV E: 76mV F: 72mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC:2.5A O/P:FULL LOAD	A:1.75A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC:36A O/P: FULL LOAD	A:28A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A: 4.5~5.8V O/P:MIN. LOAD B: 6~9V C: 10~14V D: 12~18V E: 20~28V F: 27~33V	A: 4.33V~6.26V B: 5.7V~9.8V C: 9.39V~15.46V D: 10.32V~19.50V E: 19.95V~33.78V F: 24.90V~35.86V	P
9	SET UP TIME	I/P:230VAC SPEC:1000mS O/P:FULL LOAD	A: 689mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:20mS O/P:FULL LOAD	A: 44mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:78% O/P:FULL LOAD B:80% C:82% D:83% E:84% F:85%	A:80.16% B:81.64% C:83.18% D:84.21% E:86.21% F:86.95%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC: 105%~135% O/P:TESTING	A:120% B:120% C:119% D:125% E:125% F:131.2%	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
13	OVER TEMPERATURE PROTECTION & FAN ON/OFF TEST	I/P:230VAC O/P:FULL LOAD SPEC: RTH1: OTP > = 70°C FAN ON > = 40°C FAN OFF < = 35°C	G: OTP : 74°C FAN ON : 46°C FAN OFF: 34°C	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1.2mA N-FG--<1.2mA	G: L-FG:1.0mA N-FG:1.0mA	P
15	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100M Ohms MIN. I/P-FG: 500VDC/100M Ohms MIN. O/P-FG: 500VDC/100M Ohms MIN.	G: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P
16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVDC/ 1 min. (10mA CUT-OFF) I/P - FG: 1.5KVAC/ 1 min. (10mA CUT-OFF) O/P -FG: 0.5KVAC/ 1 min. (10mA CUT-OFF)	G: I/P-O/P :0.005mA I/P-FG :5.51mA O/P-FG :5.23mA	P
17	EMS TEST	EFT TEST: EN50082-1 IEC1000-4-4	E: CRITERIA A OK	P
		SURGE TEST: EN50082-1 IEC1000-4-5	E: CRITERIA A OK	P
18	BURN-IN TEST	I/P: 230VAC O/P: FULL LOAD TA:23.6°C BURN-IN DURATION : 2 hrs	G:NON BREAK	P
19	ENVIRONMENT TEST (SAMPLE G:)	HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:54.2°C	AFTER 15 hrs NON BREAK	P
20	TEMPERATURE RISE TEST T rise OF PARTS	G: I/P :230VAC AFTER 2 hr BURN-IN O/P :FULL LOAD TA:23.6°C		P

POSITION	P/N	TEMP	T rise
BD1	BRIDGE DIODE	64.7°C	41.4°C
Q6	MAIN TRANSISTOR	56.4°C	32.8°C
T1	MAIN TRANSFORMER WIRE	78.7°C	55.1°C
D11	O/P DIODE	51.3°C	27.7°C
C33	O/P FILTER CAPACITOR	48.8°C	25.2°C
L1	O/P CHOCK	65.2°C	41.6°C
C5	I/P FILTER CAPACITOR	53.9°C	30.3°C
LF1	LINE FILTER TRANSFORMER	62.4°C	38.8°C
U4	AUTO-SWITCH MODEL	49.7°C	26.1°C
LF2	LINE FILTER TRANSFORMER	57.9°C	34.3°C

21	LIFE CYCLE	G: SUPPOSE C33 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc33:50.2°C Life: 273032 hrs I/P:230VAC O/P:FULL LOAD Ta:50°C Tc33:60.8°C Life:130955 hrs		P
22	CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)	A: FUSE : 6.3AL/250V BRIDGE DIODE : D10XB60 LINE FILTER : TF-349-R1 ET-28 TRANSFOMER : TF-294-R3 EER-35 POWER SWITCHER : 2SK727 TO-3P OUTPUT DIODE : ESAE 83-004 TO-3P OUTPUT CAPACITOR : 2200uF/16V(v) 105°C RJH INPUT CAPACITOR : HITACHI 680uF/200V 85°C HP3 P.C.B : S-240N-R1 FR-4 2 OZ DS		

DATE	SAMPLE	TEST RESULT	TEST	APPROVAL
19980512	S-240	PASS	H.C.LIOU	MAX LIN
19990518	S-240	PASS	H.C.LIOU	MAX LIN
20000211	S-240-48V	PASS	VINCENT	MAX LIN
20011011	A110A08 S-240-24V	PASS	VINCENT	MAX LIN

20011210	A111A09B S-240-48V	PASS	VINCENT	MAX LIN

PREVIOUS